ATTACHMENT A
STAFF REPORT FOR ADMINISTRATIVE CIVIL LIABILITY ORDER
LAKE BERRYESSA RESORT IMPROVEMENT DISTRICT
WASTEWATER TREATMENT FACILITY
NAPA COUNTY

The following is a chronology of pertinent events (as documented in the Regional Board case file) between adoption of the revised waste discharge requirements in June 1995 and issuance of the Administrative Civil Liability Order in March 2005.

23 June 1995: The Regional Board adopted Waste Discharge Requirements (WDR) Order No. 95-171 prescribing requirements for discharge of domestic wastewater from a treatment system owned and operated by Lake Berryessa Resort Improvement District (LBRID) to five percolation/evaporation ponds. The WDRs allow for treatment and disposal of a total of 35,000 gallons per day of domestic wastewater from the Lake Berryessa Estates development and backwash water from the community's water treatment plant. The WDRs also require that monthly monitoring reports and quarterly groundwater monitoring reports be submitted.

25 October 1995: Staff inspection. Road to ponds regraded. Culverts placed near ponds to divert stormwater. Pump and spray nozzle installed in one pond to promote evaporation. A trench had been excavated on the down slop side of the ponds. The trench contained water, which was thought to be effluent that had percolated through the pond bottoms and then surfaced below.

27 November 1995: The District submitted a report titled *"Sewer Loading and Plant Capacity Report"* which evaluated options to increase the pond capacity. In summary, the report recommended a phased approach to reduce infiltration and illegal inflow by 50% (mail a survey to residents, inspect manholes, video and repair problem areas), enhance the pond evaporation during the summer through installation of aerators, and change pond overflow culverts to raise design freeboard from three feet to two feet. "These three modifications will result in no spillage to Coral Creek and full storage capacity before the next wet season." "All recommendations should be completed or implemented prior to the first of the year."

14 December 1995: An internal memorandum from the District indicated that a spill of raw sewage estimated at approximately 50,000 gallons entered Putah Creek on 12 December 1995. The spill was caused by a power supply failure and an overflow from a main storage tank. The District failed to notify the Board of this spill within the timelines required by the WDRs.

20 December 1995: Staff memorandum describing the inadequacies of the District's 27 November 1995 technical report. The report lacks an evaluation of treatment plant capacity and disposal capacity. A water balance is not provided. The capacity discussion is not supported by calculations. The report does not describe how the facility will be changed to comply with the WDRs. The I/I reduction plan lacks conventional I/I evaluation methods.

28 December 1995: The Executive Officer issued a $25,000 Administrative Civil Liability (ACL) for a December 1995 discharge of approximately 50,000 gallons of raw wastewater to Putah Creek. The transmittal letter also requested a Technical Report on the capacity of the plant.

9 January 1996: The District submitted a revised plan and time schedule as requested during an 8 January 1996 meeting with staff. In summary, the District indicated that a capacity study for the

wastewater treatment and disposal system would be submitted by 1 April 2005. In addition, emergency electrical power would be installed and the pond access road would be improved to allow for winter inspections.

22 January 1996: The Executive Officer withdrew the ACL Complaint based upon the District's agreement to (a) submit a plan and time schedule to cease discharges, (b) supply emergency power, (c) submit a facility evaluation report by 1 April 1006, (d) repair pond access roads, and (e) submit the required monthly monitoring reports.

1 April 1996: The District submitted a report titled *"Capacity Study for the Wastewater Treatment and Disposal Facilities for Lake Berryessa Resort Improvement District."* In summary, the report concluded that the infiltration/inflow (I/I) issues at the wastewater collection system are a serious problem and can overwhelm the system's storage and disposal capacity. The report recommends (a) initiate an I/I study starting with a records review followed by physical inspections (via TV, smoke testing, or flow measurements), (b) record pond levels monthly, (c) retain a geotechnical engineer to determine the stability of the pond berms and if feasible, increase the design freeboard from three feet to two feet, (c) develop a contingency plan to deal with spills, (e) develop a water balance, and (f) evaluate enhanced disposal options (sprayfield, improving pond percolation, shallow evaporation basins).

24 July 1996: The District submitted to their Board of Directors a five-year financial plan to finance many of the improvement necessary to bring the District into compliance with their WDRs. (Note: Regional Board case file is missing this document).

11 August 1996: Spill of about 100 gallons of wastewater from a lift station.

20 September 1996: Cease and Desist Order No. 96-233 (C&D) was adopted with a compliance schedule to complete treatment plant expansion. The status of compliance with the attached C&D (as of April 2005) is as follows below. The C&D was issued to Napa County Public Works and Lake Berryessa Resort Improvement District.

REQUIREMENT	COMPLIANCE DATE	STATUS
Begin I/I Study	15 November 1996	Proposed I/I study submitted by the District on 13 November 1996
Establish financial plan (including a comparison of current sewer rates with those of other similar areas).	15 May 1997	Completed five-year financial plan on 24 July 1996 – District applied for funding through Proposition 204 and was denied by the State Water Resources Control Board on 5 November 1999
Select project	1 June 1998	Not complete

Complete project design	1 November 1998	Not complete
Commence expansion construction	1 July 1999	Not complete
Complete construction and achieve full compliance	15 September 2001	Not complete
Quarterly compliance reports (progress made toward compliance, number of sewer connections made, number of building permits issued)	ongoing	Not submitted

13 November 1996: The District submits a proposed I/I study as required by the C&D. Phase One consisted of measuring depth of flow in each of the three manholes during wet and dry periods. Phase Two would prioritize the 11 sections of the sewer system for further analysis (including sending surveys to residents and visually inspecting manholes). After analyzing the data, problem mains will be videoed by a contractor. Phase 3 involved repair of about a dozen areas identified during a August 1996 video inspection of 2,000 feet of line.

March 1998: The wastewater ponds overflow to surface water due to inadequate capacity. Volume discharged is unknown, as is number of days of spill.

12 January 1999: Status letter from District. Generator installed 1996 to provide emergency power at the water treatment plant. A portable generator was acquired for the lift stations. I/I study update: During winter of 1996/97, visual inspections made of manholes, mains, and back easements during rainstorms. 3,000 feet of sewer videoed spring of 1997, and a 300 foot section was lined in summer of 1997. Four areas repaired during the summer of 1997. Funding issues: In 1996, denied grant/loan funding from Prop. 204. In 1997, denied funding through USDA Rural Development program (median income too high). Formed a "Rate Information Group" with the homeowners and generated $36,000 per year for capital improvements to cover both the drinking water and wastewater systems. Meeting with residents to determine how to fund remaining work for both drinking water and wastewater systems.

12 January 1999: Landslide ruptures force main from holding tank to wastewater ponds, discharging approximately 50 gallons of raw sewage to Lake Berryessa. Estimated cost to fully repair is $50,000.

28 January 1999: Staff conduct a site inspection following the spill and find no evidence of seepage or overflow from the recent force main rupture. District informs staff that they may install a sixth pond and spray irrigation. Ponds have adequate freeboard, but issues with weed control. Discharger is not submitting monthly monitoring reports or quarterly C&D compliance reports.

6 March – 20 March 2000: Pond No. 5 spilled approximately 20 gallons per minute to Stone Coral Creek (tributary to Putah Creek) for an estimated total release of 432,000 gallons. Spill due to I/I input from heavy rains.

8 May 2000: The Executive Officer issued a NOV for an unauthorized discharge that occurred from 6 March through 20 March 2000. The NOV required the Discharger by 15 June 2000 to submit a written report which identifies: (a) a meeting date no later than 1 September 2000 during which the District's Board of Directors will approve a revenue plan to finance a project which will comply with the WDRs, (b) plans to restrict additional connections, and (c) interim and long term plans and time schedule to comply with the 1996 C&D Order.

14 June 2000: The District responded to NOV by submittal of letter and technical report. The letter outlined the following items to address the C&D Order: (a) a meeting on 25 July with Board of Directors to discuss the FY 00/01 budget and call a special tax for the District, (b) recommendation to the Board of Directors on 25 July 2000 that if the Special Tax is not approved then a new connection moratorium be imposed as quickly as the law allows, (c) if the Special Tax is approved then the funds will be used for the following:

Project	Design	Construction	Completion	Cost
Repair access road to ponds (earlier slides)	Current	Fall 2000	Fall 2000	$500,000 (75% of this paid by OES)
Build up pond levees (increase pond capacity)	August 2000	Fall 2000	Fall 2000	$100,000
Replace wastewater tank from which wastewater is pumped to ponds	Fall 2000	Summer 2001	Fall 2001	$80,000
I/I (smoke test, then slip lining or sewer replacement)	Summer 2000	Start 2000	Summer 2009	$50,000

It is noted that the District states that it will raise $500,000 via the tax, while the above actions constitute an expenditure of $355,000. Staff assumes that the remainder would constitute the reserve fund.

The letter also stated that the Discharger would implement an emergency short term action program during the Fall of 2000. In summary, the short term program would include: (a) irrigating in the late fall from the pond system, (b) disking the bottoms of Pond Nos. 4 and 5 to improve the percolation rates, (c) encroach to within one foot of freeboard, (d) renting Baker tanks for placement near the existing

sewage collection tank for short term storage, (e) installing a temporary Pond No. 6 to trap overflow from Pond No. 5, and (f) installing disinfection facilities to treat any overflow. The District also spoke at a homeowner's meeting to increase the public awareness of the issues.

18 July 2000: The District votes to impose a Special Tax on itself. According to the District, the assessment will generate $500,000 over 10 years, which, in combination with the operating revenue of $200,000 over the same period, was intended to provide the needed budget to accomplish all the necessary projects to bring the District into compliance with its WDRs, as well as establish a modest reserve fund.

1 and 3 August 2000: The District indicated during a telephone conversation that a geotechnical firm (Taber) would be working with them to increase the levees between Pond Nos. 4 and 5 and that some coring through the levees and inside the levees to determined permeability. In addition, the District indicated that some of the cores in the levees may be able to converted to 2-inch monitoring wells and that the District had flagged two potential locations below Pond No. 5. The District indicated that Taber would discuss the proposed work with Regional Board staff.

29 September 2000: E-mail from District providing plans and specifications for increasing the capacity of Pond #5 by raising the berm three feet. Bids will be open 11 October. Also, they plan to construct the groundwater monitoring wells in the next few weeks.

29 September 2000: Status update letter from the District. Discussion of the special tax (see above). In addition: (a) requested bids for the Pond #5 capacity project, (b) considering excavating Pond #4 and using the material to increase the berms, (c) looking to coordinate the installation of groundwater monitoring wells with other work to be done in the area and would be delayed into 2001, (d) requesting a pilot reclamation spray field project, (e) working on a boundary survey to identify areas for additional storage, (f) a storage capacity analysis would be completed by April 2001, (g) begin work on the inflow/infiltration reduction program beginning in the winter of 2001 using a budget of $5,000 per year with the program ending in the summer of 2009, (h) looking into Baker tank suppliers and chlorination equipment to be used during emergency situations, and (i) that the slide repair along the road would be postponed until 2001 and that an advance from OES of approximately $250,000 would be used for the repairs.

2 October 2000: E-mail from staff to District describing the information that would be needed to approve an emergency spray irrigation project.

30 January 2001: Letter from District regarding status report on projects and other related activities at LBRID. In summary, the letter stated that (a) the construction (raising the levees) in Pond Nos. 4 and 5 was completed, (b) sprinklers were running within Pond No. 1, 2, and 3 for additional evaporation purposes, (c) the force main below the slide area was undergoing temporary relocation, (d) that the District was planning to continue work on enhancing storage capacity issues including strengthening the levees, increasing the capacity of Pond No. 3 and constructing a new pond (Pond No. 6), (e) that because of the limited budget of $5,000 for I/I work each year, the District determined that the $10,000

quote for smoke testing was too much and would complete the work in 2001/2002 budget. The District also indicated that their operators were monitoring manholes using the "Kentucky Windage" method at selected locations to determine if one run of sewer main had more flow than others.

19 February 2001: The District notified staff of a spill from a force main coupling leaking approximately 100 gallons. The leak occurred within 30 feet of Putah Creek in the pipeline, which follows the access road through a slide area from the holding tank to the treatment ponds. The pipeline displaced when the access road shifted from soil liquefaction conditions. Napa County proclaimed a condition of emergency on 20 February and on 22 February authorized $100,000 to be spent repairing the slide.

22 February 2001: District requests permission of the Board to discharge water treatment plant filter backwash to Putah Creek during high flow events. This would allow a 15% reduction in hydraulic load delivered to the pond system.

26 February 2001: Call from District stating that they would probably start spilling wastewater the next day, but would bring in Baker tanks to capture as much possible.

5 March 2001: Regional Board staff denies the District's proposal to discharge backwash water into a tributary of Lake Berryessa because the Basin Plan prohibits all domestic and industrial discharges to Lake Berryessa.

16 March 2001: Copy of letter from District to the First American Title Company regarding boundary questions. District states that they are operating a spray irrigation system (note: in violation of WDRs).

17 December 2001: The District provides a status report on activities at LBRID. In summary, the report states: (a) that Pond No. 5 is very close to spilling into Stone Corral Creek and that all of the ponds with the exception of Pond No. 6 are at capacity, (b) that capacity was added to Ponds No. 4 and 5 "16 months ago", (c) that Pond No. 6 was constructed approximately 3-months ago (October 2001), (d) that the District is running sprinklers upslope of Pond No. 4 and Pond No. 6 and that they did not observe any runoff, (d) that they used 5 Baker tanks earlier in the year, but the tanks are not effective due to the magnitude of flows, (e) they evaluated trucking the waste but again not effective due to magnitude of the flows, (f) spent $10,000 on smoke testing and found six areas of large concern and that these areas could be a major contributor to the pond overloading, (f) of these areas, one has been repaired and the other five have been located and are scheduled for repair by the middle of January 2002. Finally, the report requests the Regional Boards authorization for a pilot project for a spray field application of treated pond effluent. During subsequent phone conversations, staff requested design calculations and drawings for proposed spray field.

27 December 2001: Following a conversation with the District, Regional Board staff sends the District via fax a copy of an example groundwater monitoring well installation workplan.

2 and 3 January 2002: The District spilled approximately 15,000 gallons of raw wastewater from steel holding tank to ground surface. The holding tank is located about 350 feet from Putah Creek. Spill traveled through a swale to a depression and percolated into the soil. According to the Discharger, no wastewater entered any surface waters from the spill. The spill was the result of I/I into the collection system. The District plans to purchase a Baker tank for $20,000 to collect any water that escapes from the wet well.

6 January 2002: The District spilled 3,000 gallons from the wet well holding tank. According to the Discharger, no wastewater entered any surface waters from the spill. The spill was the result of I/I into the collection system.

7 January 2002: The District submits a status report describing the January 2002 wastewater spills. The report states that the no traditional cleanup effort was needed because all fecal matter, paper, and plastics were retained in the tank. The District also indicated: (a) that they would repair the problem area before the end of the week, (b) they would be installing a replacement pump in the wet well, (c) that the District rented a Baker tank and would purchase a Baker tank for about $25,000 gallons, and (d) that the District was beginning to perform water quality monitoring (bacteriological and BOD) in the ponds and in Putah Creek, upstream of the ponds.

14 January 2002: The District sends a letter to a citizen who has concerns about the facility. The letter states that in 1998 the District was approximately $50,000 in debt and has since begun to balance the budget. In addition, the letter stated that since the T-2000 ballot passed in July 2000 that approximately $60,000 annually would be used to begin addressing the most critical projects.

23 January 2002: The District provides a status report stating that all six ponds are at capacity and Pond No. 5 is very close to spilling into Stone Corral Creek. The report also states that the District is running sprinklers upslope of Pond No. 4 and Pond No. 6 and that they are not observing any runoff. In addition, the report states that the water is being disinfected prior to discharge and that the controlled discharge is the most responsible method to deal with the overflow. Finally, the report states that BOD and bacteriological samples are being collected in the ponds, and both upstream and downstream of the overflow pipe from Pond No. 5.

8 February 2002: Staff memo to counsel describing issues at LBRID and providing a chronology.

25 January 2002: Regional Board staff conducted an inspection of the facility and noted excessive vegetation in Pond Nos. 1, 2, and 3, and surface discharge from the (non-permitted) spray application field towards Stony Creek. The treatment ponds are at capacity and threaten to spill during rainfall events. A large pump and hose is in place, which appears to be used to remove water from Pond No. 4 to a swale adjacent to Stone Corral Creek. The District indicated that prior to the site inspection that no discharge to surface water was occurring.

20 February 2002: Regional Board staff conducted an inspection of the facility and noted excessive vegetation in Pond Nos. 1, 2, and 3. The freeboard in the ponds was between 1 and 2 feet. The District indicated that the sprinklers in the spray application field were last operated on 31 January 2005.

12 March 2002: Letter from staff transmitting the January and February inspection reports. The letter states that staff cannot authorize either a temporary or permanent spray field, and that the Discharger must submit a Report of Waste Discharge if it wishes to employ a permanent spray field operation.

11 July 2002: The District sends out an addendum to the contract documents for the Slope Stabilization Improvement Project (i.e., stabilizing the slope above the force main leading to the wastewater ponds).

March 2003: The District notifies staff that it replaced the existing 30,000 gallon raw sewage tank with a 91,000 gallon tank.

5 January 2004: The District submits a report for a wastewater spill estimated at approximately 300 gallons to ground that occurred on 29 December 2003 from the 91,000 gallon holding tank. The report indicated that the spill was due to I/I resulting in a backup in the sump basin. The report stated that the District was looking at the possibility of installing a third wastewater pump at the lift station to help handle the wastewater flows in storm situations. The spill report also states that a seventh wastewater pond has been installed.

18 February 2004: The District was issued two Notices of Violation.

a. The first was for the 300-gallon wastewater spill that occurred on 29 December 2003 from the holding tank. The NOV required the District by 1 March 2004 to submit a report containing a timetable for corrective actions and specific steps that would be taken to prevent future spills. In addition, because staff had not received monthly monitoring reports since September 2003, the NOV required the District by 1 March 2004 to either submit the missing monitoring reports or submit a report describing the steps taken to ensure that all future monitoring reports were submitted in a timely manner.
b. The second NOV was for the non-submittal of quarterly groundwater monitoring reports. Because no groundwater monitoring reports had been submitted since adoption of the WDRs in 1995, staff requested that the District submit a Groundwater Monitoring Well Installation Workplan by 1 June 2004 and a Well Installation Report by 1 August 2004. In addition, because the Monitoring and Reporting Program was outdated, staff sent the District a Revised Draft MRP. Any comments were to be submitted to staff by 1 April 2004.

8 March 2004: The District reported a spill between 20 and 30 gallons of raw sewage that seeped from a manhole on to the street at Colt Court.

11 March 2004: During a site inspection, staff observed abundant vegetation in and around Ponds Nos. 1 through 3, and a sprinkler irrigation system located next to Pond No. 7. The sprinkler system is not authorized in the WDRs. Ponds No. 6 and No. 7 are not authorized by the WDRs.

12 March 2004: The District responded to 18 February 2004 NOV stating that the reason for the spill was the I/I that occurs during significant rain events in the winter months. The District stated that the sewer system was installed in the mid 1960's and is in need of repair, and because many laterals, trunk lines, and mains experience unusual amounts of I/I, the pumping capacity of the lift station, which delivers the effluent to the treatment ponds, is inundated. In regards to corrective actions, the District stated that it will appropriate funds - provided that they are available- to purchase a third pump prior to 31 December 2004 to serve as a backup for pumping the effluent from the storage tanks to the treatment ponds. The District also stated that the permanent resolution to the problem is the preparation of a 5 to 8 year infiltration and inflow elimination plan to achieve a 75-90% reduction in I/I.

The letter also provided an update on previous projects: The landslide area that damaged the force main was repaired in November 2002. The old sewage storage tank was replaced with a 91,000 gallon storage tank and 22,000 gallon Baker tank in March 2003. The pond capacity increases (adding two more ponds) were completed by 2002. I/I work is still on-going. Working on a rate increase (30% over a two-year period) so that there can be a reserve fund.

14 April 2004: No comments were received from the District regarding the draft revised MRP; therefore, the Executive Officer issued the Revised MRP, which became effective on 1 May 2004. Quarterly groundwater monitoring is required, as it was in the previous MRP.

8 April 2004: As a follow-up to the 11 March 2004 site inspection, staff issued a NOV. The NOV required the District to submit a report by 1 June 2004 documenting the removal of the vegetation within and around the wastewater ponds. In addition, the NOV required that the District install a flow meter by 1 July 2004 (and submit a written report to that effect) to ensure that flows to the ponds were accurately being measured. Finally, the NOV stated that if LBRID did not comply with the 1996 C&D that a draft enforcement order would soon be issued.

4, 6, 7 & 10 January 2005: The District telephones staff indicating that their wastewater ponds are at maximum capacity and that they are concerned about a possible berm failure. Staff indicates to the District that they must do everything possible (i.e. tanking and hauling) to prevent a wastewater spill and comply with their WDRs.

11 January 2005: District notifies OES that it is releasing sewage to Stone Corral Creek.

19 January 2005: The District submits a spill report for a spill of wastewater to Stone Corral Creek (a tributary to Lake Berryessa) that began on 11 January 2005 and was the result of inflow/infiltration problems in the collection system and the lack of capacity in the ponds. The District states that the spill was a controlled discharge from the Pond No. 5 overflow pipe.

1 February 2005: The District submits a follow-up report indicating that the spill from Pond No. 5 was 1,080,000 gallons as of 28 January 2005. In addition, the report stated that prior to the spill, bacteriological testing on Pond No. 5 and from Stone Corral Creek had begun on 5 January 2005.

The report also stated that two days prior to the discharge, the pond water was chlorinated. Finally, the District stated that they would begin spraying wastewater from Pond No. 6, which contains chlorinated wastewater from Pond No. 5. The spraying would occur down slope of Pond No. 6 with the wastewater traveling approximately 200 feet through the grassland prior to reaching Stone Corral Creek.

14 February 2005: Staff issued a NOV for a spill of domestic wastewater and water treatment plant backwash water from Pond No. 5 to Stone Corral Creek. The spill began on 11 January 2005, and as of 8 February totaled approximately 1,381,500 gallons. The NOV required: (a) the District to provide daily progress reports that must include the amount of wastewater spilled or sprayed, chlorine residual tests, and any other test results (i.e. total and fecal coliform, etc.) of the ponds and creek, (b) the District to perform daily inspections of the ponds and take daily freeboard measurements, and by 1 April 2005 submit a timetable for corrective actions at the facility, considering requirements of the 1996 C&D, including submittal of a revenue plan.

4 March 2005: The Executive Officer issues a $400,000 Administrative Civil Liability Complaint (No. R5-2005-0507) for violations of the WDRs and C&D during 10 spills (five to surface water and five to ground) from the period of February 1998 to present. As of 28 February, over 2.3 million gallons had been spilled. (As of 1 April, over 4.1 million gallons have spilled).

GJC/WSW: 8-Apr-05